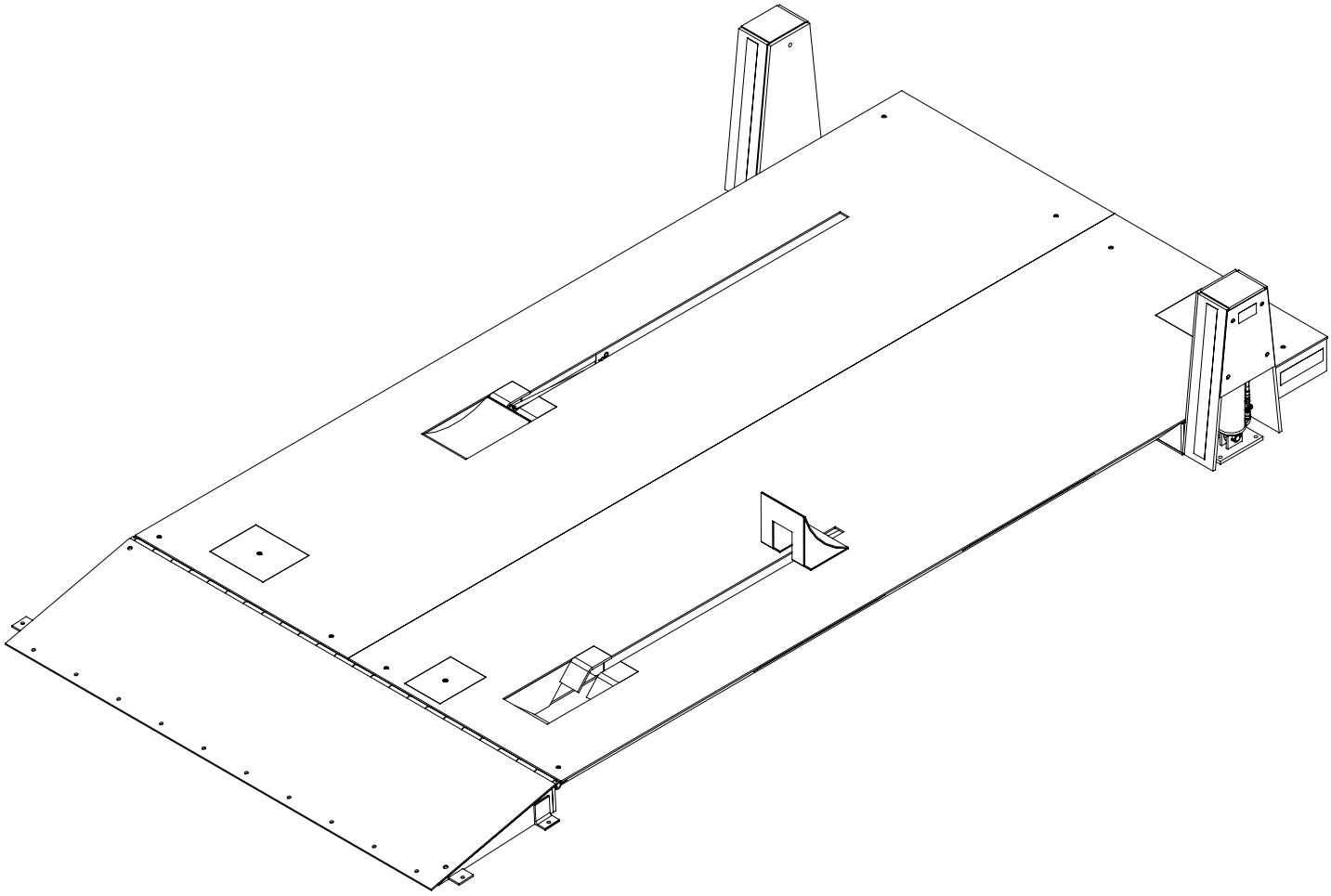
TRUCK LEVELER WITH AUTOMATIC WHEEL RESTRAINT



This manual applies to truck leveler units manufactured beginning December 2012 with serial number 61065693 and higher.

⚠WARNING

Do not install, operate or service this product unless you have read and understand the Safety Practices, Warnings, Installation and Operating Instructions contained in this User's Manual. Failure to do so could result in death or serious injury.

User's Manual

Installation, Operations, Maintenance and Parts

Part No. 6011500E

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INTRODUCTION

Welcome and thank you for choosing this truck leveler.

This User's Manual contains information that you need to safely install, operate and maintain the truck leveler. It also contains a complete parts list and information about ordering replacement parts. Please keep and read this User's Manual before using your new light system.

SAFETY SIGNAL WORDS

You may find safety signal words such as DANGER, WARNING, CAUTION or NOTICE throughout this Owner's Manual. Their use is explained below:

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible death or injury.

⚠DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠CAUTION

Indicates a potentially hazardous situation which, if not avoided may result in minor or moderate injury.

NOTICE

Notice is used to address practices not related to personal injury.

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SAFETY PRACTICES

⚠WARNING

Read these safety practices before installing, operating or servicing the wheel restraint. Failure to follow these safety practices could result in death or serious injury.

If you do not understand the instructions, ask your supervisor to explain them to you or call your local distributor.

OPERATION

Use restricted to trained operators.

Use by untrained people can cause property damage, bodily injury and/or death. Your supervisor should teach you the safe and proper way to use the truck leveler. Read and follow the complete OPERATION PROCEDURE on page 8 before use. DO NOT USE THE TRUCK LEVELER IF IT IS NOT WORKING RIGHT. Tell your supervisor it needs repair.

Keep hands and feet clear of the truck leveler at all times. Stay clear of the truck leveler when it is moving.

Do not load or unload any vehicle unless you make certain the wheel restraint has securely chocked the vehicle's rear wheels and set the brakes. If the wheel restraint does not chock the vehicle's tire for any reason, BE CERTAIN TO MANUALLY CHOCK THE VEHICLE WHEELS BEFORE LOADING OR UNLOADING.

Before chocking wheels or engaging vehicle restraint, dump air from air ride suspensions and set parking brakes.

Before restraining a vehicle check that proper clearance is available under the vehicle throughout the full range of chock motion.

Do not operate the restraint with equipment, material, or people directly in the path of the restraint.

Keep hands and feet clear of the chock mechanisms and guide path at all times. Stay clear of the restraint when it is moving.

INSTALLATION, MAINTENANCE AND SERVICE

Before doing maintenance or service push "STOP" pushbutton in. Remove power at the fused disconnect during all electrical or mechanical service. Disconnect must be properly locked out during maintenance or service of equipment. Failure to disconnect power may result in death or serious injury.

Place barricades around pit on dock floor and drive while installing, maintaining or repairing truck leveler.

Do not stand in the driveway between the dock and a backing vehicle.

Do not use the truck leveler as a step.

Keep hands and feet clear of guide tracks and moving parts at all times.

All electrical troubleshooting and repair must be done by a qualified technician and meet all applicable codes.

Disconnect the power and properly tag or lock off before doing any electrical work.

If it is necessary to make troubleshooting checks inside the control panel with the power on, USE EXTREME CAUTION! Do not place fingers or uninsulated tools inside the control panel. Touching wires or other parts inside the control panel could result in electrical shock, death or serious injury.

If the wheel restraint does not operate properly using the procedures in this manual, BE CERTAIN TO MANUALLY CHOCK THE VEHICLE WHEELS BEFORE LOADING OR UNLOADING. Call your local distributor for service.

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INSTALLATION

PIT MOUNTED INSTALLATION

⚠WARNING

Before installation read and follow all safety practices shown on page 3 and the operation section of the manual.

Improper installation of the truck leveler could result in death or serious injury to dock workers or other users of the truck leveler.

Place barricades around pit on dock floor and drive while installing, maintaining or repairing truck leveler.

Be certain bystanders in the driveway stand clear when truck leveler is operated.

1. Before installing truck leveler, use the certified pit drawings to check the entire pit for correct dimensions and conduit locations.

2. If your unit was shipped in one piece, grease hinge rod and feed through hinge tubes on deck and rear hinge angle. Insert roll pins through end hinge tubes.

3. Weld the four hinge angle support plates (supplied) to the 8" channel at front of pit. See Fig. 1.

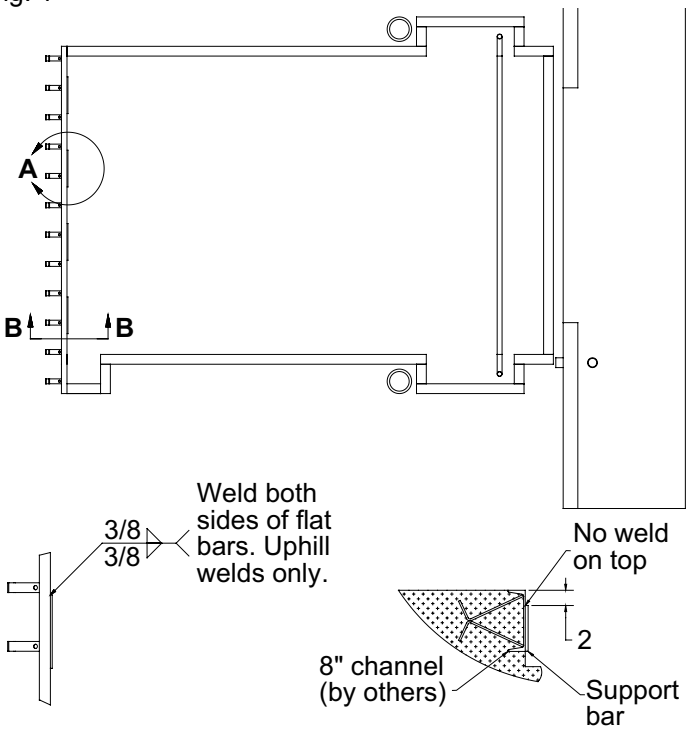
4. Weld access cover support angles in hose junction of pit. See Fig. 2.

NOTE:

The following instructions cover the standard power supply and controls supplied for the truck leveler with automatic wheel restraint. If special controls, features or interlocks are part of this installation, refer to the manuals or prints related to those features for specific instructions.

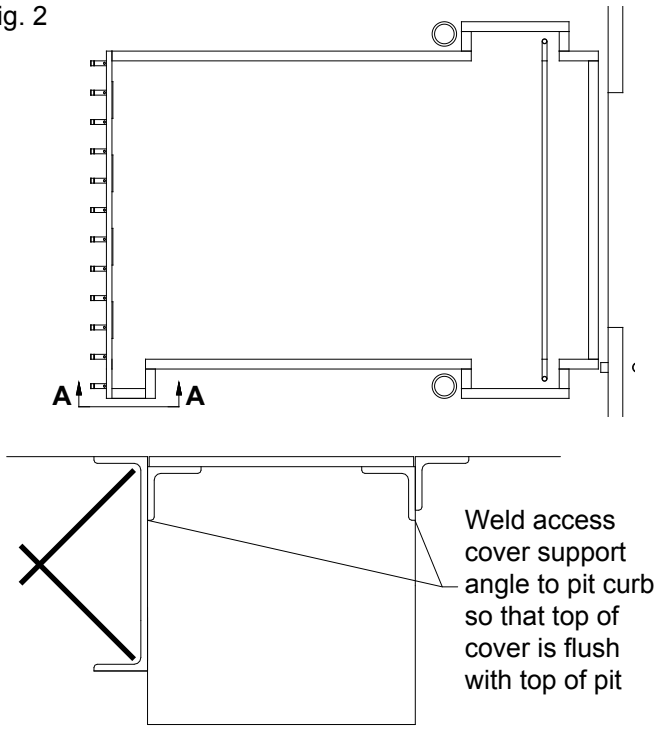
5. Position the hydraulic power supply in the chosen location. Be sure to orient the unit so that the side with the level sight glass is clearly visible and the filler cap on top is easily accessible.

Fig. 1



Detail A **Section B-B**

Fig. 2



Section A

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6. Mount the outside communication lights/alarm and sign so that they are visible to the vehicle driver. Refer to the installation drawing for recommended dimensions. Make sure the Red light is on top and the Green light is on the bottom when the light assembly is mounted. See Fig. 3.

NOTE:

The chock motion alarm assembly must be mounted in the area of the chock.

⚠WARNING

The chock motion alarm assembly must be mounted in the area of the chock. Failure to mount the alarm in close association with other dock and restraint components may reduce its effectiveness which could result in death or serious injury. The motion alarm assembly is designed and controlled to sound whenever the chocks are in motion. Each alarm is strictly associated with a single unit, its mounting position must be such to maintain that association at installation.

7. Mount the vehicle driver caution sign immediately below the light and alarm assemblies. This sign must also be clearly visible in the driver's side mirror. See Fig. 3.

8. Disconnect the #6 hose linking the two lift cylinders and feed through conduit running laterally across pit.

NOTICE

Whenever running any hoses through conduit, the end of the hose must be capped in order to prevent dirt and other debris from entering the hydraulic system.

9. Mark hoses and feed through conduit from power unit location to truck leveler pit.

10. Position power unit and anchor to floor.

11. Attach hoses to power unit. See Fig 4.

Fig. 3

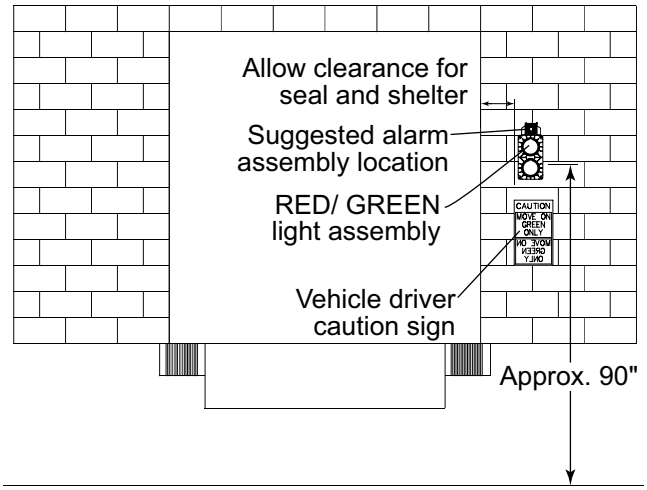
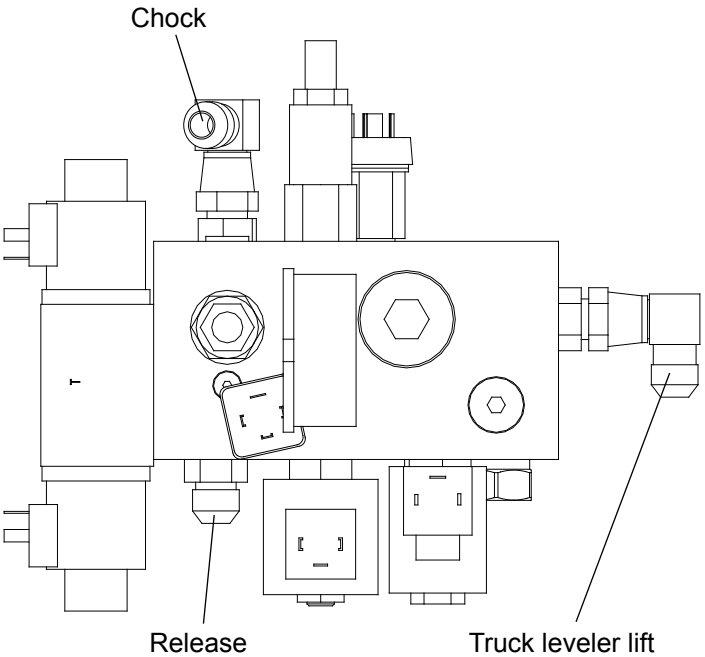

Allow clearance for seal and shelter
Suggested alarm assembly location
RED/ GREEN light assembly
Vehicle driver caution sign
Approx. 90"

Fig. 4



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INSTALLATION, continued

12. Remove cylinder shipping bolts from both cylinder base brackets.

13. Place a chain or other suitable lifting device through the lugs located at the four corners of the deck. The lifting lugs have been provided for the purpose of lifting during installation. The truck leveler should not be lifted in any other manner when placing into position. See Fig. 5.

⚠WARNING

Make sure lifting devices are in good condition and have a lifting capacity of at least 15,000 lb. at the lifting angle they are being used at. Stand clear of the truck leveler when it is being placed into position. Never allow anyone to stand on or near the truck leveler when it is being lifted or placed into position. The truck leveler can tip or swing into bystanders causing severe injury and/or death.

14. Lift the entire unit into the pit. Square deck with pit sides, shimming behind hinge angle where necessary. Hinge angle should rest on top of support plates welded in step 2. Weld behind each stationary hinge segment to 8" channel. See Fig. 6.

15. Manually extend each lifting cylinder until the base bracket contacts the pit floor. Ensure lifting cylinder is plumb when truck leveler is at level grade. Anchor cylinder base brackets in position with 5/8" x 4-1/2" wedge anchors.

16. Attach chock and release hoses to corresponding marked hoses on deck at pit hose junction. Attach #8 lift hose to fitting at base of large lift cylinder. See Fig. 7.

17. Locate the limit switch in the cylinder housing. Run limit switch wires down the cylinder housing and attach to hydraulic hose. Feed hose and wires through conduit (pit mounted units) to the other side of the truck leveler. Attach #6 hose to lift cylinders. See Fig. 7.

18. Attach control panel to wall adjacent the dock opening on the left side facing out from inside the dock at approximately 5' from the ground to center of control panel. See Fig. 8.

Fig. 5

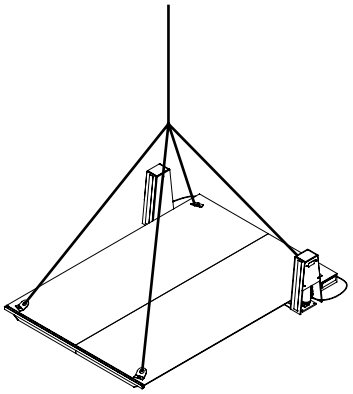
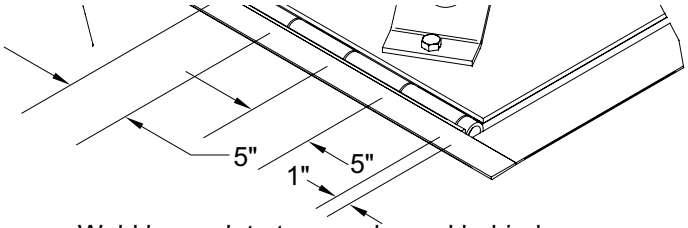


Fig. 6



Weld base plate to rear channel behind every base plate hinge tube using 1/4" welds

Fig. 7

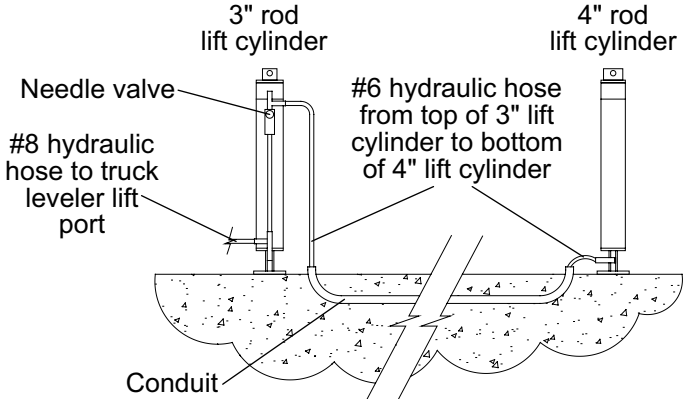
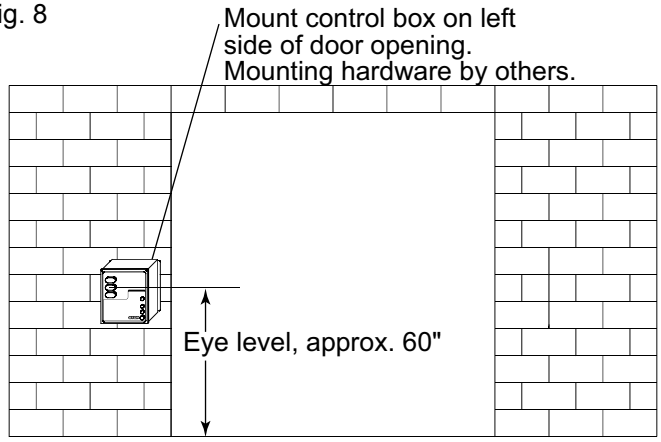

3" rod lift cylinder
4" rod lift cylinder
Needle valve
#8 hydraulic hose to truck leveler lift port
#6 hydraulic hose from top of 3" lift cylinder to bottom of 4" lift cylinder
Conduit

Fig. 8



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ELECTRICAL INSTALLATION

⚠DANGER

Before installation read and follow the Safety Practices on page 3. Failure to follow these safety practices could result in death or serious injury.

Before doing any electrical work, make certain the power is disconnected and properly tagged or locked off. All electrical work must be done by a qualified technician and must meet all applicable codes. If it is necessary to make troubleshooting checks inside the control panel with the power on, USE EXTREME CAUTION. Do not place fingers or uninsulated tools inside the control panel. Touching wires or other parts inside the control panel may cause electrical shock, death or serious injury.

High voltage power wires should be run in separate conduit from low voltage control circuit wiring.

1. Wire the outside lights and alarm assembly to the control panel according to the wiring diagram located inside control panel.

2. Run limit switch wires back to the control panel. Wire the limit switch wires to the control panel according to the wiring diagram located inside control panel.

3. Wire the hydraulic power supply's electrical box to the control panel according to the wiring diagram located inside control panel.

4. The Leveler Stored (terminals 24V and 10) and Door Closed (terminals 24V and 9) signals are jumpered at the factory. Their functions are to prevent the release of the restraint while the leveler is not stored or the door is not closed. Install input switch devices as necessary to use these features. Reference drawing 6001045 for details.

5. Check the control panel for the voltage supplied. The control panel is factory wired for the voltage specified on the order. The label inside the control panel will show the pre-wired voltage requirements.

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INSTALLATION, continued

NOTE:

A fused disconnect is required for each vehicle restraint as a means of disconnecting and limiting incoming power to the control panel. This disconnect is supplied by others unless specifically ordered from 4Front Engineered Solutions, Inc. For correct disconnect fuse size and fuse type, refer to the charts and wiring diagram located inside control panel for the proper voltage.

6. Check the drive motor for voltage requirements (it may accept dual voltage). The drive motor's voltage(s) are stamped into the nameplate on the motor.

7. Verify that both steps 6 and 11 match the voltage specified on the order. If they do not, contact your local representative for assistance.

8. Check that the fused disconnect for this installation is a lockable type and meets all applicable electrical and safety codes.

9. Mount the fused disconnect near the control panel and wire three phase power to it from an available power source.

10. Check voltage at the disconnect. It must match voltages checked in steps 6 and 11.

11. For vehicle presence sensor (optional) installed termination, see schematic included in panel.

    11.1 The sensor is a 4 wire device. First terminate the positive lead (brown wire) to any "C" terminal on the input board.

    11.2 Terminate the negative lead (blue wire) to any "0V" terminal in the panel.

    11.3 Terminate the load lead (black wire) to the terminal specified in the job specific wiring schematic.

    11.4 Tape (insulate) the unused white wire.

12. Run three phase power wires from the fused disconnect to the control panel.

    12.1 Connect power to control panel.

    12.2 Press RAISE.

    12.3 If truck leveler raises, skip to step 14.

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13. Reverse the motor rotation (if necessary) as follows:

    13.1 Disconnect power.

    13.2 Reverse the motor wiring by switching any two of the three motor wires connected to the overload relay: T1, T2, and T3.

    13.3 Repeat 12.1-12.3.

14. Anchor outside guardrails with 3/8” x 3" wedge anchors such that access is denied between the cylinder and dock. See Fig. 15.

LIFT CYLINDER SYNCHRONIZATION

The two main lifting cylinders are synchronized before they leave the factory. It should only be necessary to re-synchronize them if the #6 hose connecting them is disconnected allowing air to enter the line. This hose should only be disconnected if it is required to run it through conduit as in a pit mounted truck leveler installation.

PROCEDURE

1. Remove any load from the truck leveler

2. Remove the lift cylinder cover plates.

3. Open the needle valve on the larger cylinder (3" diameter rod) by first loosening the Allen key set screw and then turning the knurled knob counter-clockwise two turns.

4. Depress the **RAISE** pushbutton to raise the truck leveler to its highest position.

5. Purge any air from the smaller “slave” cylinder (4" diameter rod) by slowly loosening the bleeder screw at the top of the cylinder housing until only oil escapes. Tighten the bleeder screw.

6. Raise the truck leveler to its highest position. Close the needle valve by turning clockwise until tight and then tighten Allen key set screw.

7. Lower deck fully.

8. Replace the lift cylinder cover plates.

9. The truck leveler with wheel restraint is now ready for start up and test. Close and secure the control panel.

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RESTRAINT START-UP AND TEST

⚠DANGER

Do not service this product unless you have read and followed the Safety Practices, Warnings, and Operation instructions contained in this manual. Failure to follow these safety practices could result in death or serious injury.

Before doing maintenance or service push "STOP" pushbutton in. Remove power at the fused disconnect during all electrical or mechanical service. Disconnect must be properly locked out during maintenance or service of equipment. Failure to disconnect power may result in death or serious injury.

NOTICE

Before putting the restraint into service, there are preparations and functional checks that must be made. They are:
1) Bleeding air from the hydraulic cylinder and lines.
2) Checking chock travel.

⚠DANGER

The following steps 2-4 will be taken with the power on and the control panel open. Only qualified electrical personnel should access the control panel while under power.

1. Open the control panel and activate the system by turning on the power at the fused disconnect.

2. Verify component hook-up:

   2.1 Note the condition of the control panel's indicator lights. The RED light will likely be flashing upon initial power up. This indicates a pre-operational condition. If it is solid RED proceed to step 5.

   2.2 Pull the **STOP** button out, then press and hold the **RELEASE** pushbutton. The motor should run long enough to bring RELEASE pressure up which will reset the system and illuminate the panel's RED light solid. If successful, proceed to step 5.

   2.3 If the chock is stored and the motor continues to run, press the **STOP** button to stop the motor and perform the following checks:

   a) Verify proper operation of the valves for the RELEASE function. While the motor is running, check for magnetism at the solenoid coils. SV1 should be energized. SV2 must NOT be energized. If solenoids are not properly energized, refer to the troubleshooting section of this manual to determine the cause of the malfunction.

   b) If SV1 is properly energized while SV2 is NOT energized and the chock moves toward the chocked position, swap hydraulic hoses at chock and release ports and repeat step 2.2. Allow enough time while holding the **RELEASE** pushbutton for the chock to return to its stored position. See Fig. 4.

   c) If the chock is seated in the stored position and does not move, monitor for a RELEASE pressure indication at the PLC (input 3). If pressure is not indicated, refer to the electrical troubleshooting section of this manual to determine the cause of the pressure switch's failure to indicate pressure.

3. This mode provides a means to assign a unique time stamp to each restraint assembly. The Calibration routine will send the chock to the far end of its travel to determine the time required to travel the whole of the unit's length. This value is then adjusted and used to maximize cylinder stroke while preventing potential false hitches. Accurate calibration requires there be no truck present at the dock location being calibrated and the chock travel area should be clear of obstruction and/or debris. In order to obtain an accurate calibration, the chock must be monitored during travel for binding or stalling. The most effective means to affect this is to view the system pressure gauge located on the power unit housing. Another method is to listen to the pitch of the motor while the chock is in motion. Abrupt changes in pressure or motor pitch imply restriction which can adversely affect the accuracy of the calibrated value.

   3.1 To activate Calibration mode: insure the restraint is stored (home position) with a solid red lamp illuminated and the **STOP** button is pulled out. Simultaneously press and hold the Engage and Release pushbuttons for 5 seconds. Panel lamps will begin to flicker to indicate the activation of the Calibration mode. If the procedure completes successfully, the chock will automatically reverse and return to the home position.

   3.2 To immediately halt Calibration mode: press the **STOP** button. The restraint can then be returned to the home position by normal means. If the calibration procedure is interrupted in this manner, Calibration registers will be cleared. No new values will be calculated.

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4. Verify CHOCK and RELEASE functions:

   4.1 With the chock stored and the inside RED light illuminated solid, ensure the **STOP** button is out and press the **CHOCK** pushbutton. The chock should move toward the chocked position and the inside and outside RED lights will flash. The motion alarm should sound while the motor is running. If the chock fails to move, press the **STOP** button and refer to the troubleshooting section.

   4.2 The chocks will travel full stroke in approximately 45 seconds and should issue a Truck Not Found alert indicated by the RED and AMBER lights flashing together with an audible alarm pulse sound.

   a) If a fault is issued indicated by a solid RED light accompanied by the AMBER light flashing a count, the chock may be traveling too slowly. Refer to the troubleshooting section if this occurs.

   b) If the motor stops and the inside GREEN light is illuminated solid, the Full Stroke proximity switch is misadjusted or malfunctioning. Refer to the troubleshooting section for adjustment procedures if this occurs.

   4.3 With the chocks in the chocked position (chock's full travel), ensure the **STOP** button is out and press the **RELEASE** pushbutton. Both chocks should move toward the stored position and store. The time required to store the chocks should not be greater than 45 seconds. Once both are stored, the motor will stop, the inside RED light will illuminate solid and the outside GREEN light will flash. Refer to the troubleshooting section if errors occur.

5. Check the outside lights. With the chock retracted, the GREEN light should be flashing and the RED light should not be illuminated.

6. Check the override function:

   6.1 Press the **CHOCK** pushbutton on the face of the control panel. The inside RED light will flash. The outside lights should switch immediately to flashing RED. The chock will travel full stroke toward the dock. A motion alarm should be sounding to indicate motion.

   6.2. The chock should stop after approximately 45 seconds.

   6.3. When the Chock stops after approximately 45 seconds the fault alarm should sound. The RED and AMBER lights will flash to indicate a Truck Not Found condition. The outside RED light should remain flashing.

   6.4 Note PLC input 1 is OFF.

   6.5 Select RESTRAINT override. The fault alarm should silence and the inside lights should change to steady Amber and Green. The outside lights should remain flashing Red.

7. Check the Release function:

NOTE:

RELEASE will not function unless the truck leveler is in its fully lowered position.

   7.1 Press the **RELEASE** pushbutton on the face of the control panel. The inside lights should change to RED flashing. The RED/GREEN outside lights should remain RED flashing.

   7.2. The chocks should travel full stroke and both store themselves in its pocket. This travel should take less than 45 seconds.

   7.3. When the chocks stop in the pocket, the motor will shut off and the inside and outside lights should change back to steady RED inside and flashing GREEN outside.

   7.4 Note PLC input 1 is ON.

8. Check the chock function:

   8.1 Press the **CHOCK** pushbutton on the face of the control panel and let the chocks travel for 20 seconds. Press the **STOP** button. Pull **STOP** button out and press the **CHOCK** pushbutton. The chocks should run until the motor stops. The inside light should change to steady green and the outside light should stay flashing red.

   8.2 Press the **RELEASE** pushbutton to restore the chocks.

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OPERATING INSTRUCTIONS

⚠WARNING

Before operating the vehicle restraining device, read and follow the Safety Practices, Warnings, and Operation instructions contained in this manual. Use by untrained people could result in death or serious injury.

Do not use the Restraint if it looks broken or does not seem to work right. Tell your supervisor at once.

Keep hands and feet clear at all times. Stay clear of the wheel restraint when it is moving.

Do not load or unload any vehicle unless you make certain the wheel restraint has securely hitched the vehicle's rear impact guard and set the brakes. If the wheel restraint does not chock the vehicle's tire for any reason, BE CERTAIN TO MANUALLY CHOCK THE VEHICLE WHEELS BEFORE LOADING OR UNLOADING.

Enter the vehicle only when the GREEN signal light on the control panel is on. You must check the GREEN signal light each time that the vehicle is entered. If the GREEN light goes off at any time during loading operations, immediately cease loading operations and check the wheel restraint to insure that it is securely hitched.

If the power to the wheel restraint is interrupted, immediately cease operations and check the unit. consult the troubleshooting instructions to reset the lights when power resumes.

Vehicles leaving or moving when loading and unloading are in process, could result in death or serious injury.

Failure to follow these safety practices may result in death or serious injury.

Vehicles should always enter and leave when the truck leveler is in the fully lowered position only.

NOTE:

The following failure conditions will immediately halt motor operation. A restraint fault will be issued.

- PS1 and PS2 on at the same time.
- Vehicle not found.
- Maximum motor run time – 45 sec.
- Early chock – 2.5 sec.

If vehicle restraint malfunctions, SOLID RED and FLASHING AMBER lights indicate an error condition exists. An audible alarm will sound when the maximum motor run time is exceeded. Press **RELEASE** pushbutton to store restraint, then **CHOCK** pushbutton if required. If restraint continues to malfunction, manually chock wheels and switch to **RESTRAINT OVERRIDE**. A qualified technician must service the restraint.

For a description of the status of lights and alarms during different operating conditions see page 26.

NOTICE

The wheel restraint requires that vehicles have adequate under carriage clearance throughout the path of the chock. Be sure 14" of clearance is present along the entire path the chock will travel. Failure to do so may result in damage to the vehicle, its attachments, or the chock.

NOTE:

At all times that the chock is in motion the motion alarm will sound.

TO CHOCK VEHICLE

1. Check for clearance under the vehicle throughout the entire chock path.

2. Press **CHOCK** pushbutton.

NOTE:

Chock will not activate unless truck leveler is in fully lowered position.

3. Inside light will switch from steady RED to flashing RED.

4. Outside lights will switch to flashing RED.

5. When vehicle is properly chocked, the RED flashing inside light will switch to a GREEN steady light. Outside light will remain flashing RED.

   If vehicle cannot be chocked, inside RED and AMBER lights will flash and the fault alarm will sound. If this occurs:

   5.1 Make certain vehicle brakes are set.

   5.2 Manually chock vehicle tires.

   5.3 Select **RESTRAINT OVERRIDE**.

   5.4 Inside lights will switch to steady AMBER and GREEN, and the fault alarm will silence.

   5.5 Outside lights will remain flashing RED.

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OPERATING INSTRUCTIONS
(FOR STANDARD CONTROL PANELS)

TO RAISE VEHICLE :

1. Before raising vehicle, it MUST be properly restrained with a suitable vehicle restraint system.

2. Once vehicle is safely chocked, it may be raised by pressing and holding the **RAISE** pushbutton until the vehicle bed is at the desired height.

3. Vehicle may now be loaded or unloaded.

TO LOWER VEHICLE :

1. Store dock leveler.

2. Press the **LOWER** pushbutton until the Truck Leveler is fully lowered.

3. **RELEASE** vehicle restraint.

TO RELEASE VEHICLE

NOTE:

RELEASE will not function unless the leveler is in its fully lowered position.

1. Press **RELEASE** pushbutton.

2. Inside light will switch to flashing RED.

3. Outside light will flash RED.

4. After Chock is stored, inside lights will switch to steady RED. Outside lights will switch to flashing GREEN.

5. Vehicle may now pull out.

TO STOP CHOCK

NOTE:

Chock travel may be stopped at any time during its travel.

1. Press **STOP** button.

2. Inside RED light will flash at a slow rate to indicate a stopped condition.

3. Outside RED light will flash.

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OPERATING INSTRUCTIONS, continued

TO RESTART CHOCK

1. Pull **STOP** button out.

2. Inside and outside lights will remain unchanged. (Inside light remains flashing RED, Outside light remains flashing RED.)

3. Press either **CHOCK** or **RELEASE** pushbutton. If the **CHOCK** pushbutton is pressed the chock will resume its previous sequence. See previous section for details.

4. If the **RELEASE** pushbutton is pressed the Chock will store itself in the same manner as it does when releasing a vehicle.

5. After chock is stored, inside lights will switch to steady RED. Outside lights will switch to flashing GREEN.

JOG

This feature will allow the restraint to be manually returned to the stored position using the **RESTRAINT OVERRIDE** switch and **RELEASE** pushbutton in the event of certain restraint failures. To initiate the Jog Mode, rotate and hold the **RESTRAINT OVERRIDE** switch and press the **RELEASE** pushbutton to retract the wheel chock. See the Panel Communications table for details regarding panel lamp status.

TO MANUALLY RELEASE CHOCK

NOTE:

In the event of a power failure the chock may be manually released to allow a vehicle to leave the dock.

1. Push **STOP** button in. Remove power at fused disconnect.

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2. Identify the manual release valve located on the top of the valve block of the power unit. See Fig. 9.

3. The manual release valve is activated by adjusting the valve fully counter-clockwise.

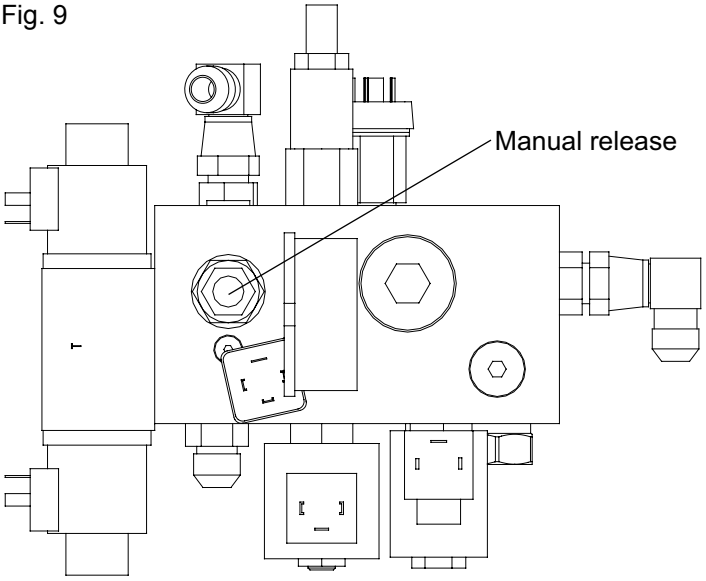
⚠WARNING

Stay clear of the chock while it is being returned to the stored position. Failure to do so may result in death or serious injury.

4. Slide the chock back along the track until it is in the stored position by slowly pulling the vehicle forward.

5. Adjust the valve fully clockwise and reapply power at the fused disconnect after chock is in pocket.

Fig. 9



TO RESTART CHOCK AFTER MANUAL RELEASE

1. Turn on power at fused disconnect.

2. Pull **STOP** button out.

3. Press **RELEASE** pushbutton.

4. The wheel restraint is now ready for use.

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TROUBLESHOOTING

⚠DANGER

Before doing maintenance or service push "STOP" pushbutton in. Remove power at the fused disconnect during all electrical or mechanical service. Disconnect must be properly locked out during maintenance or service of equipment. Failure to disconnect power may result in death or serious injury.

⚠WARNING

Before doing any maintenance or repair read and follow the safety practices listed on page 3 and the operations section of this manual.

Place barricades on the dock floor around the truck leveler and in the driveway in front of the equipment while installing, maintaining or repairing the truck leveler.

NOTE:

This troubleshooting section assumes that the truck leveler has been installed properly and that all electrical and hydraulic connections have been made correctly. If this is a new installation or electrical or hydraulic work has been done on the unit, refer to the appropriate schematics and/or instructions to verify that the unit is installed correctly.

RAMP WILL NOT LIFT (WHEN RAISE PUSHBUTTON IS PRESSED)

1. **MOTOR RUNS**

   1.1 Too much weight on ramp.

   1.2 Ramp already at maximum height.

   1.3 Pressure relief valve set too low - factory set at 2800 PSI.

   1.4 Leaking or broken hose connection.

   1.5 Failed pump or pump/motor coupling.

2. **MOTOR DOES NOT RUN**

   2.1 Overload has been tripped.

   2.2 Other electrical problem - consult appropriate schematic.

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3. **RAMP WILL NOT LOWER (when LOWER pushbutton is pressed)**

3.1 Ramp is already in the fully lowered position.

3.2 Defective lowering solenoid valve or coil. Replace.

3.3 Obstruction underneath ramp preventing downward travel. Remove obstruction.

3.4 Velocity fuse(s) in lift cylinders tripped. Reset velocity fuses by pressing **RAISE** pushbutton to lift ramp slightly.

3.5 Other electrical problem - consult appropriate schematic.

4. **RAMP RAISES UNEVENLY**

4.1 Lift cylinders not synchronized. Follow synchronizing procedure described on page 9.

4.2 Leak or break in #6 hose connecting the two lifting cylinders. Repair or replace.

5. CHOCK DOES NOT ENGAGE OR RELEASE

5.1 Ramp is not fully lowered. Lower ramp fully.

5.2 Limit switch is out of adjustment.

5.3 Remove cylinder enclosure cover exposing chock cylinder with limit switch. See Fig. 16.

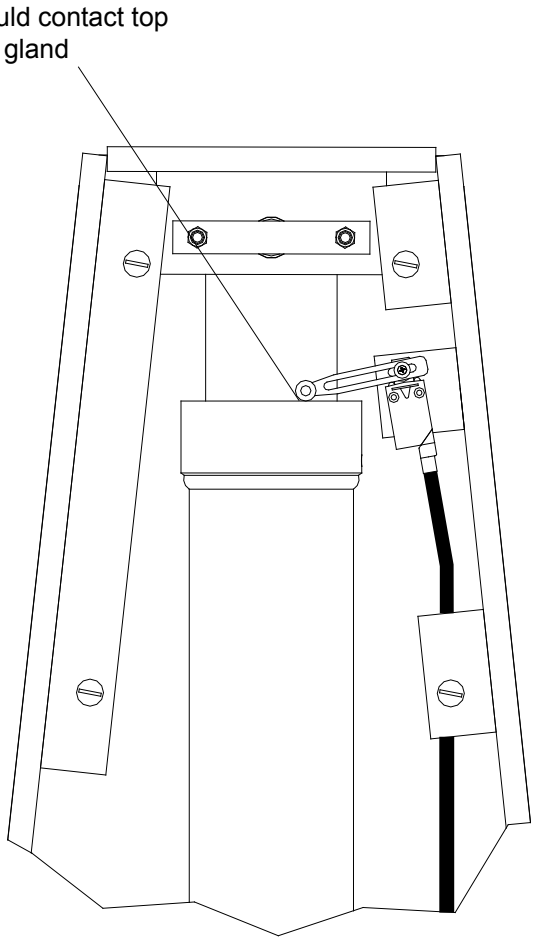
5.4 Lower truck leveler fully and then raise approximately 1".

5.5 Loosen nut on arm and adjust roller position such that limit switch will trip just prior to truck leveler being fully lowered.

5.6 Tighten nut on arm and lower truck leveler to check that switch trips upon fully lowering unit. Several trials may be necessary to get the adjustment correct.

5.7 Replace cylinder enclosure cover.

Fig. 10



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TROUBLESHOOTING

MECHANICAL TROUBLESHOOTING

1. Chock begins to move, drops back into pocket.
   1.1 Check chock for obstructions preventing proper operation. Clear any obstructions present.

   1.2 Press the **RELEASE** pushbutton to reset chock.

   1.3 Check the rollers under the chock to ensure they move freely. Lubricate as required.

   1.4 Lubricate the ramp surface of the chock pocket with anti-seize compound.

   1.5 Press the **CHOCK** pushbutton to chock vehicle.

2. Motor continues to run after vehicle is chocked.
   2.1 The motor will automatically shut off and an alarm will sound.

   2.2 Select **RESTRAINT OVERRIDE** to silence the alarm.

   2.3 The hydraulic system is not making proper pressure, check all hydraulic connections for leaks. Check all electrical connections.

   2.4 Repair any leaks. Test operation of the vehicle restraint.

3. During release cycle motor continues to run after chock is stored.
   3.1 The motor will automatically shut off and an alarm will sound.

   3.2 Check all electrical and hydraulic connections and components carefully.

NOTE:

For a table describing the status of the lights and alarms during the operation of the wheel restraint see page 26.

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ELECTRICAL TROUBLESHOOTING

⚠DANGER

Before doing maintenance or service push "STOP" pushbutton in. Remove power at the fused disconnect during all electrical or mechanical service. Disconnect must be properly locked out during maintenance or service of equipment. Failure to disconnect power may result in death or serious injury.

1. None of the lights on the controller in the control panel are on.
   1.1 Check that the fused disconnect switch is on.

   1.2 Check all transformers and fuses. See wiring diagrams located inside control panel.

DIAGNOSTICS

The PLC continuously monitors system operation and will indicate when it is malfunctioning. If an error occurs that could be potentially dangerous, the restraint will halt operation and the inside panel lamps will display an indication of the error.

If a restraint fault has occurred:

- Inside RED lamp is on.
- Inside AMBER lamp is flashing a trouble code.
- The unit will attempt to return to the stored position when the **RELEASE** pushbutton is pressed. All other functionality is suppressed.

To identify the specific problem, count the flashes of the AMBER lamp and compare the number to the table below. The count sequence will be repeated until the cause of the restraint fault is corrected. A two second pause between flash sequences is employed.

TROUBLE CODE DEFINITIONS

Trouble Code	Trouble Definition
2	PS1 and PS2 on at the same time
5	Motor run timeout exceeded
6	Chock pressure sensed too early

2. An indicator light on an outside light or on the control panel does not work.
   2.1 Check for power across LED wires.

   2.2 If no power is present, check all wires, fuses, and transformers leading to the lights.

   2.3 If power is present and light does not light replace the LED.

3. The system's controls operate properly, but the motor does not operate.
   3.1 Check the overload relay.

   3.2 The overload is factory preset to automatically reset after it cools in the event of an over-current condition. If the overload relay has tripped, it will be indicated.

   3.3 Wait 1-2 minutes for the overload device to cool and normal operations will be restored.

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SPECIFICATIONS

GENERAL
PLATFORM SIZE
TL-AC 1018: 120" wide x 216" long
TL-AC 1020: 120" wide x 240" long

LIFTING CAPACITY
60000 lb.

VERTICAL TRAVEL
24" Standard

CHOCK ENGAGEMENT DISTANCE
TL-AC 1018: 144" and 91"
TL-AC 1020: 91"

PLATFORM WEIGHT
24" Travel:
TL-AC 1018 surface mount: 10,900 Lbs.
TL-AC 1018 pit mount: 10,000 lbs
TL-AC 1020 surface mount: 11,350 Lbs.
TL-AC 1020 pit mount: 10,450 lbs

POWER UNIT
PUMP
5.4 GPM @ 1800 RPM (gear pump)

MOTOR
7.5 HP, 3 PH, 1725 RPM, TEFC, continuous duty
Approx. full load amperage:
208V/3PH/21A
230V/3PH/19A
460V/3PH/9.5A
575V/3PH/7.9A

PRESSURE RELIEF SETTING
2800 PSI

PRESSURE SWITCH SETTINGS
Chock 1400 PSI
Release 1300 PSI

FLOW CONTROL
Fixed- 7 GPM

RESERVOIR CAPACITY
16 gallon

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Acceptable Fluids: An all weather hydraulic fluid with a viscosity of 15 CSt at 40°C (100°F), such as:
Shell Tellus T 15
Mobil Aero HFA (49011)
Exxon Univis: HV13, N15, J13
Texaco Aircraft Oil #1554
U.S. Oil Co.,Inc #ZFI-5606 (Low Temp.)

CONTROL PANEL
WIRING SCHEMATIC
Located inside control panel

MINIMUM RUNTIME SETTING
3 seconds

MAXIMUM RUNTIME SETTING
TL-AC (5.4 GPM pump) 45 seconds

SECONDARY CONTROL VOLTAGE
24 VAC

CYLINDERS
Lift fully synchronized

LIFT
24" Travel (standard)
1 - 5" Diameter piston, 3" diameter rod, 31-3/4" collapsed length, 21-5/8" stroke

1 - 4" Diameter ram, 31-3/4" collapsed length, 21-5/8" stroke

CHOCK
TL-AC 1018
(1) 3" diameter piston, 2" diameter rod, 91" stroke
(1) 3" diameter piston, 1-1/2" diameter rod, 67-1/2" stroke

TL-AC 1020
(2) 3" diameter piston, 2" diameter rod, 91" stroke

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OPTIONS

⚠DANGER

Before doing any electrical work, make certain the power is disconnected and properly tagged or locked off. All electrical work must be done by a qualified technician and must meet all applicable codes. If it is necessary to make trouble shooting checks inside the control panel with the power on, USE EXTREME CAUTION. Do not place fingers or uninsulated tools inside the control panel. Touching wires or other parts inside the control panel may cause electrical shock, death or serious injury.

⚠WARNING

Do not service this product unless you have read and followed the Safety Practices, Warnings, and Operation instructions contained in this manual. Failure to follow these safety practices could result in death or serious injury.

WIRING OF CONTROL AND PUMP OPTIONS

AUXILIARY OUTPUT

The wheel restraint control is provided with a normally open contact point which closes when the trailer has been chocked. This contact may be used for auxiliary equipment or communication. Terminals R13 and R14 are the access points for this feature. If power is lost while unit is chocked, the connection between R13 and R14 will be lost.

NOTE:

See wiring diagrams located inside control panel.

TRAILER PRESENT SENSOR (OPTIONAL)

The trailer present sensor senses a vehicle at the dock and transmits a signal to the control panel. This turns on the panel face AMBER light. Mount the sensor. See Fig. 11. Ensure the sensor's logic switch is set to L/O (Light Operate). The switch is located on the top of the sensor under a plastic cover. Wire the switch. Wire the sensor into the panel per the per the job specific schematic located in the panel. Test for proper operation as per below.

OPERATIONS

No Trailer Present

- Inside lights display Solid RED outside display GREEN.

Trailer Arrives

- Inside lights switch to Solid AMBER and RED, outside lights continue to display GREEN.

Operator engages vehicle restraint

- Inside lights switch to Solid GREEN, outside lights switch to display RED.

Operator releases vehicle restraint

- Inside lights switch to Solid AMBER and RED, outside lights continue to display GREEN.

Trailer Departs

- Inside lights display Solid RED outside display GREEN.

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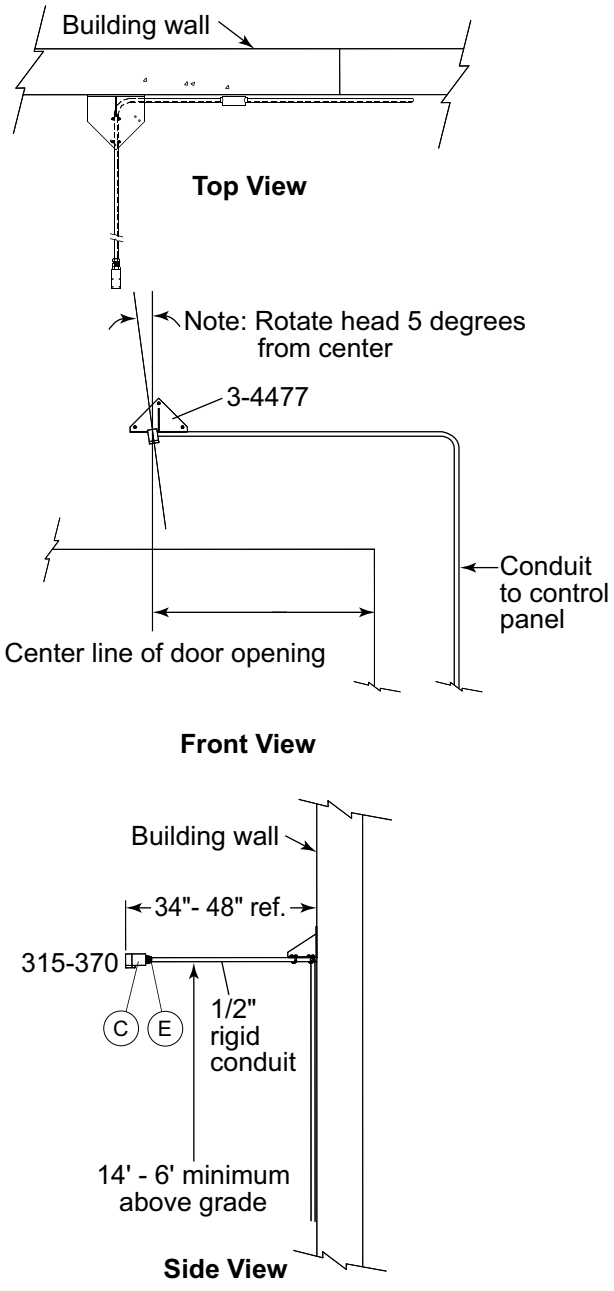
Fig. 11



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PLANNED MAINTENANCE

⚠DANGER

Before doing maintenance or service push "STOP" pushbutton in. Remove power at the fused disconnect during all electrical or mechanical service. Disconnect must be properly locked out during maintenance or service of equipment. Failure to disconnect power may result in death or serious injury.

⚠WARNING

Before servicing the truck leveler, read and follow the Safety Practices on page 3 and the operation section of this manual.

After checking lights, be certain lights are returned to the proper display. If no vehicle is at the dock, or the vehicle is not chocked, the RED inside light should be lit and GREEN outside light should be flashing. If a vehicle is at the dock and wheels are chocked, the GREEN inside light should be lit and the RED outside light should be flashing.

Place barricades on the dock floor around the truck leveler and in the driveway in front of the equipment while installing, maintaining or repairing the truck leveler.

Be certain that the truck leveler is securely supported using two independant support devices before doing any maintenance or repair work under the truck leveler.

DAILY

1. Operate the wheel restraint to assure that it operates smoothly and that the chock moves freely along the entire length of the track.
2. Check all lights and alarms to ensure they are in proper working order.
3. Inspect dock bumpers. Missing bumpers must be replaced.

WEEKLY

1. Check for leaks on the hydraulic power unit.
2. Check for damaged hydraulic fittings.
3. Check that pins and pin locks are in place.
4. Clean hydraulic cylinders, ramp hinge assembly, hydraulic hoses and truck leveler pit to remove debris.

MONTHLY

1. Check for damaged hinge tubes on ramp hinge assembly.
2. Check for cuts in hoses and loose or leaking fittings.
3. Adjust hydraulics to maintain level deck (if required).
4. Lubricate ramp hinge assembly.
1. Check fluid level on the reservoir. If required add hydraulic oil.
2. Check the rollers under the chock to ensure they move freely.
3. Check all operating, warning, and caution labels and signs to be sure they can be read. Replace them if required.
4. Check the chock pocket and pan for debris.
5. Check for loose, frayed and damaged wires or hydraulic leaks.

QUARTERLY

1. Grease fitting on spherical bearing at bottom of lift cylinders.
2. Visually inspect labels and replace if worn or missing.
3. Check level and condition of hydraulic fluid.

ANNUALLY

1. Drain, flush and change oil. Use only oils specified.
2. Remove and clean hydraulic oil pump strainer and reservoir.

AS REQUIRED

1. Lubricate rollers under chock.
2. Clean out chock pocket and pan.
3. Lubricate the ramp surface of the chock pocket with anti-seize compound.

Acceptable Fluids: An all weather hydraulic fluid with a viscosity of 15 CSt at 40°C (100°F), such as:
Shell Tellus T 15
Mobil Aero HFA (49011)
Exxon Univis: HV13, N15, J13
Texaco Aircraft Oil #1554
U.S. Oil Co.,Inc #ZFI-5606 (Low Temp.)

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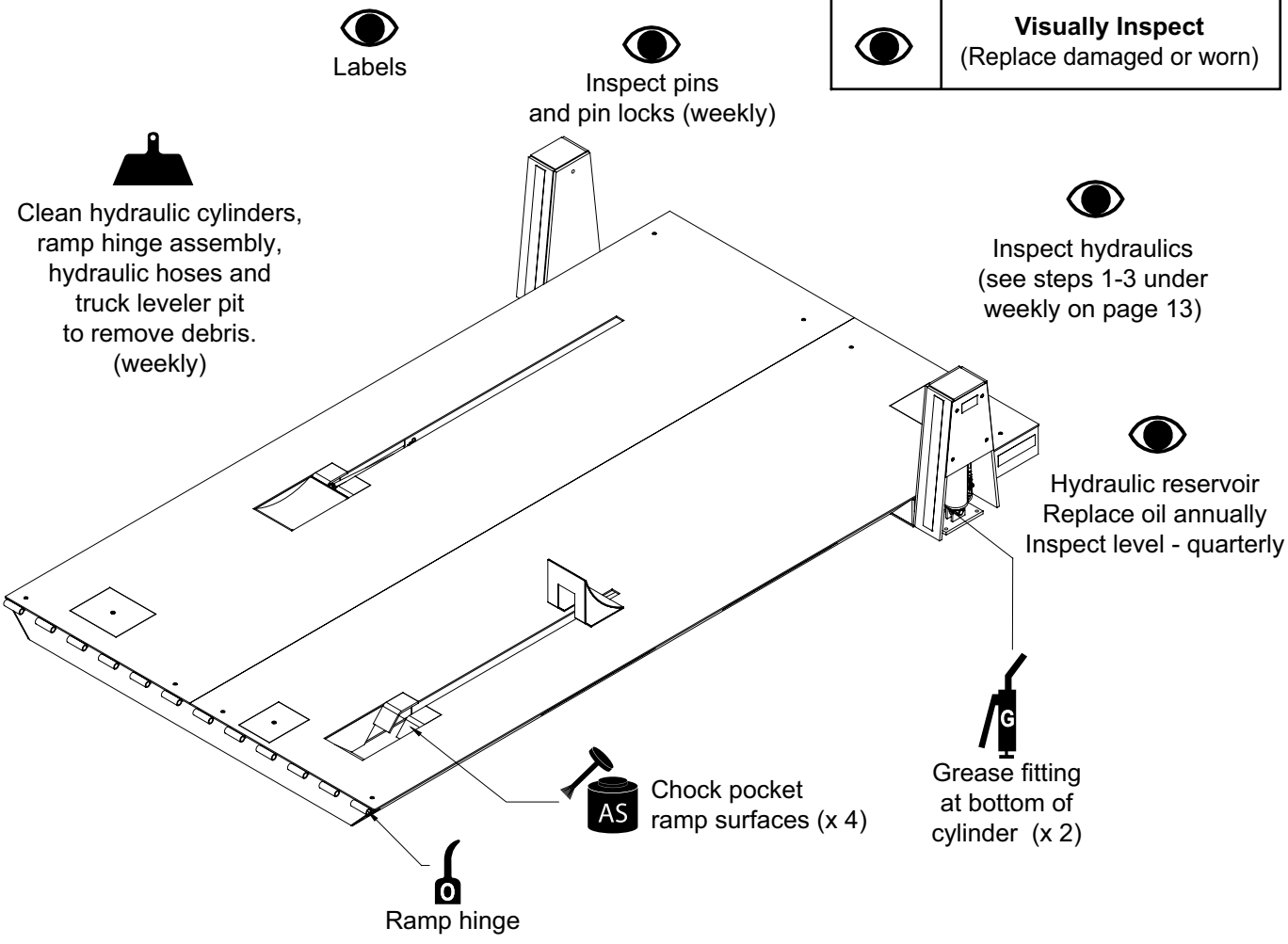
Fig. 12

Legend	
Symbol	**Description**
O	**Lubricate - Oil** Light Oil - SAE 30
AS	**Anti-Seize Compound**
G	**Lubricate - Grease** Molybdenum disulfide NLGI #2
	Cleaning (Location - frequency)
	Visually Inspect (Replace damaged or worn)



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LIGHTS/ ALARMS STATUS TABLE

Table 1 describes the state of the lights and alarms during the normal operating modes of the wheel restraint.

Restraint Position	Inside Red	Inside Amber	Inside Green	Fault Alarm	Ext Red	Ext Green
Home (Stored)	s					f
Moving (no fault present)	f			s	f	
Stopped	f_s				f	
Chocked			s		f	
Restraint Override		s	s		f	
Jog Mode (manually initiated)		s	s		f	
Truck Not Found (TNF) **	f (code)	f (code)				
Restraint Fault	s	f (code)			f	

Table 2 describes the effects on the loading lights when interconnected to a VSL (Vertical Storing Leveler).

VSL Position (Restraint Chocked)	Inside Red	Inside Green	Horn (VSL)	Amber Pilot (VSL)	Ext Red
Stored		s		s	
Floating		s		s	
STOP button pressed while floating	f		f		
Between stored and float (moving)	f			s	
Between stored and float (stopped)	f		s	s	
Error (overload or simultaneous float and stored condition)	nc	nc	nc	f	f*

*** * Special case restraint fault**
*** Asserted if restraint stored**
s = solid
f = flashing
f_s = flashing at slow rate
nc = no change

Outside lamp flashes GREEN only when all conditions are safe for the vehicle to arrive or depart, i.e. restraint and leveler stored with no alarms present. It flashes RED by default.

NOTE:

An outside mounted motion alarm sounds whenever the motor is running to warn personnel of a hydraulic ram that is in motion.

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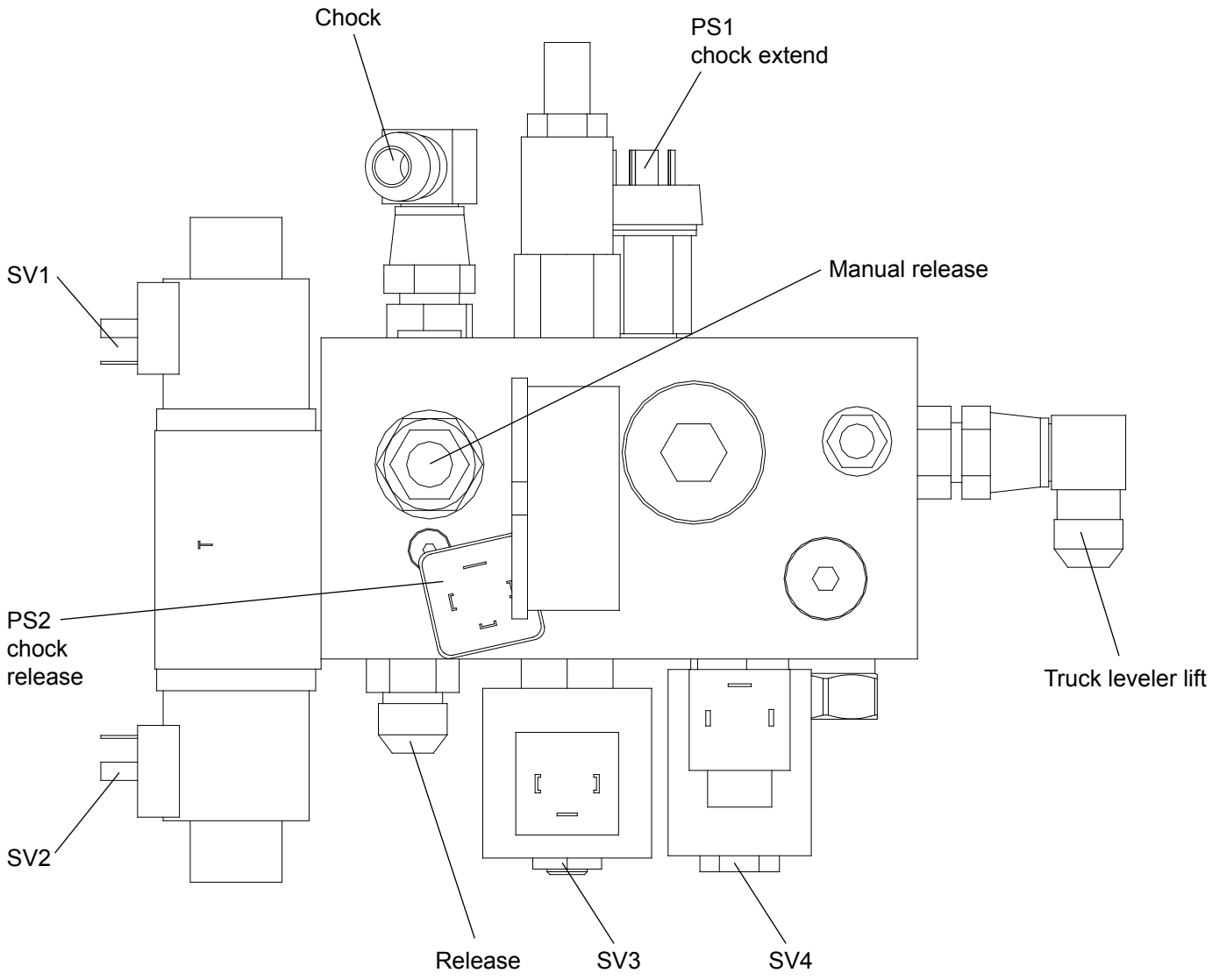
HYDRAULIC MANIFOLD BLOCK

Fig. 13



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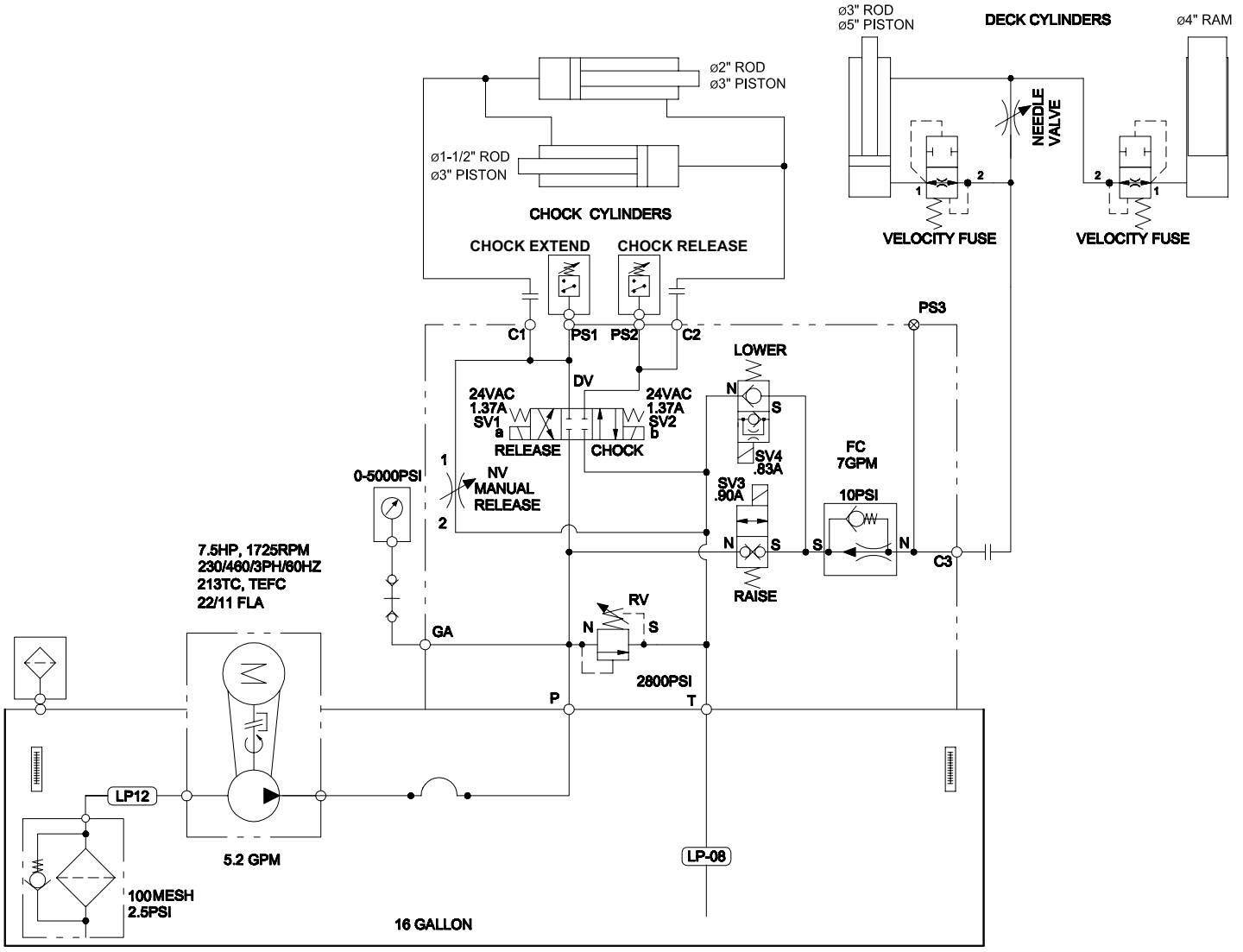
HYDRAULIC SCHEMATIC

Fig. 14



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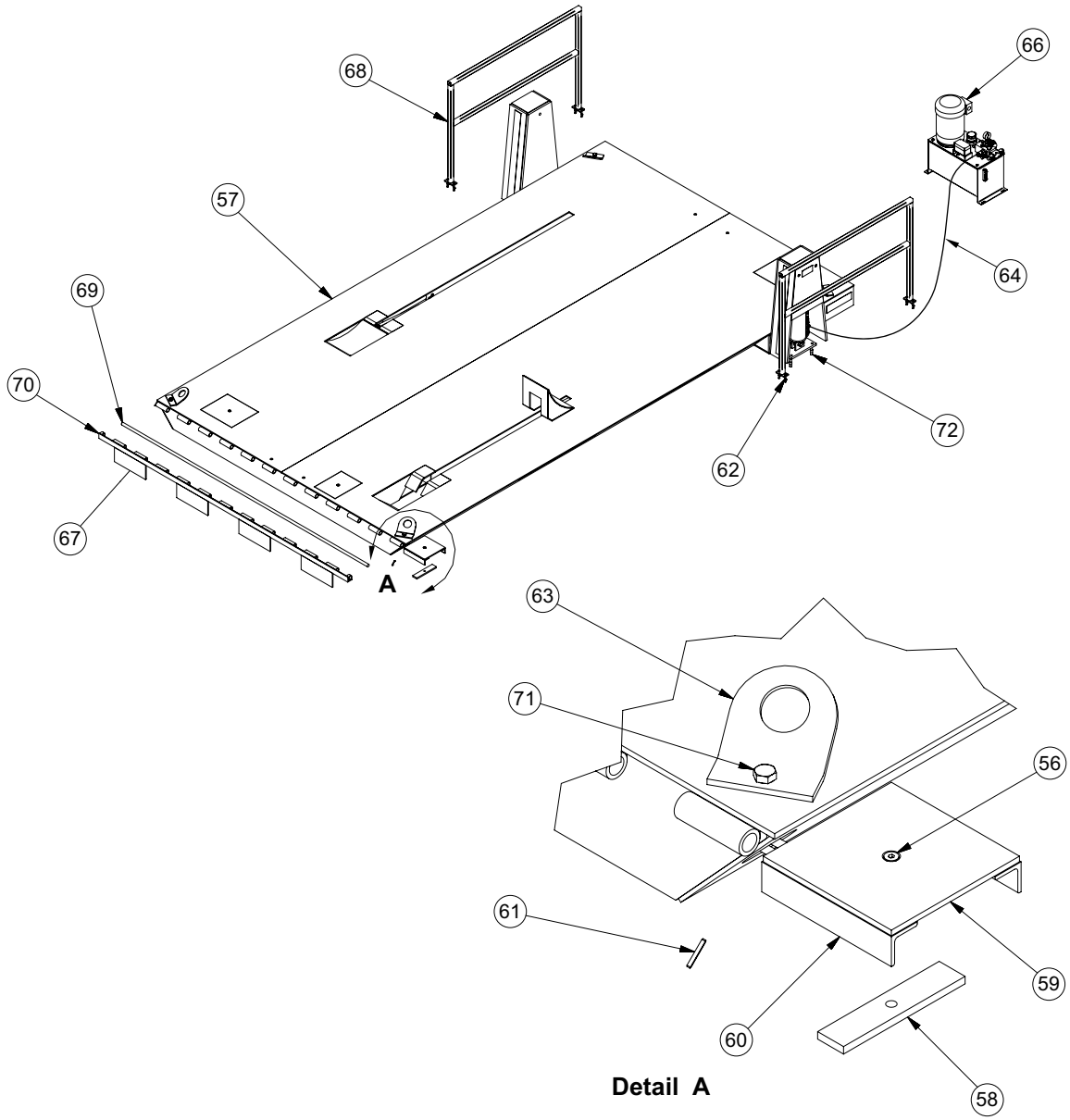
⚠WARNING

To ensure proper function, durability and safety of the product, only 4Front original replacement parts must be used. Incorporation of replacement parts or modifications that weaken the structural integrity of the product, or in a way alter the product from its normal working condition at the time of purchase from 4Front Engineered Solutions could result in product malfunction, breakdown, premature wear, death or serious injury.

Fig. 15



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PARTS LIST — TRUCK LEVELER, continued

Fig. 16

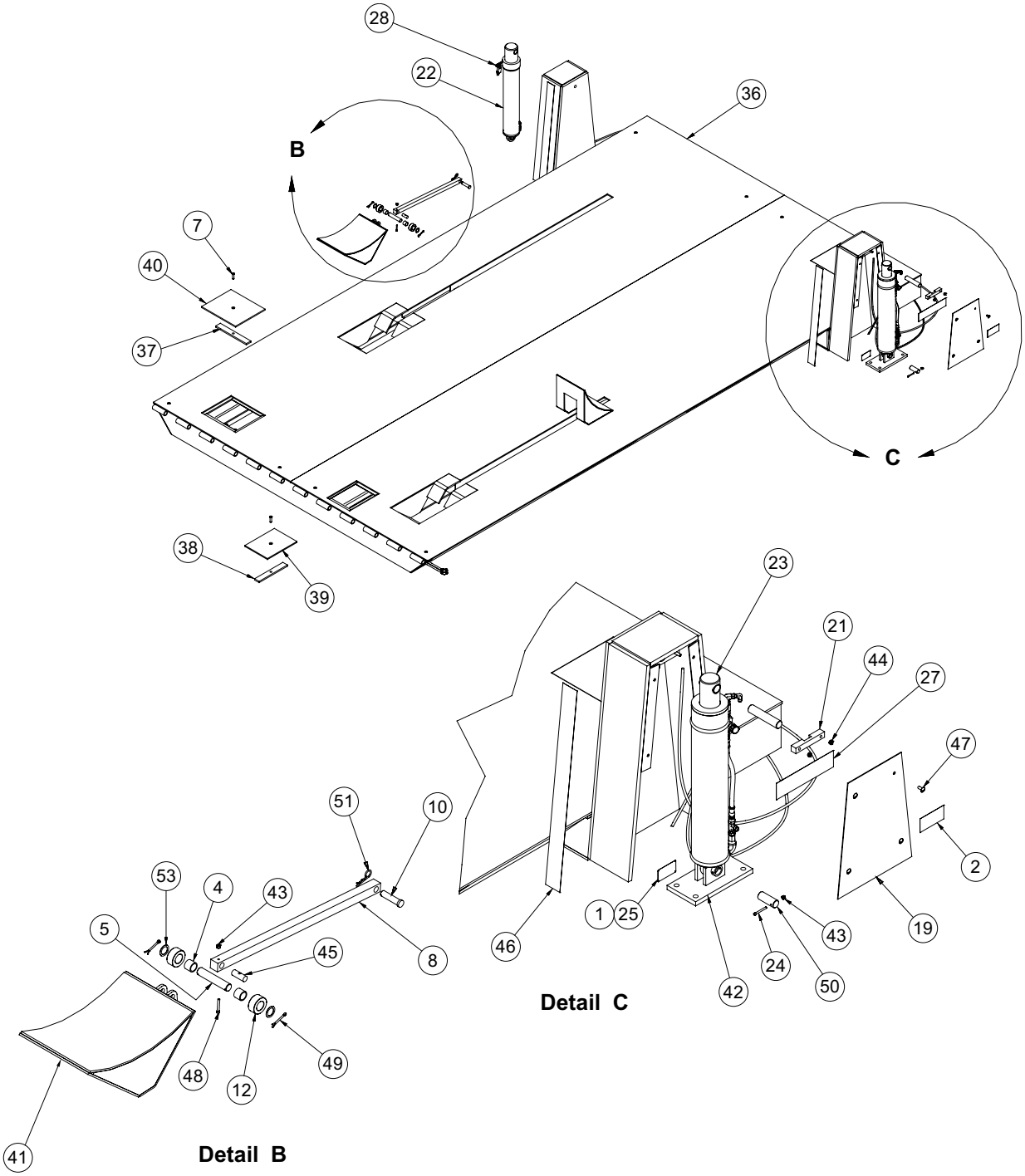

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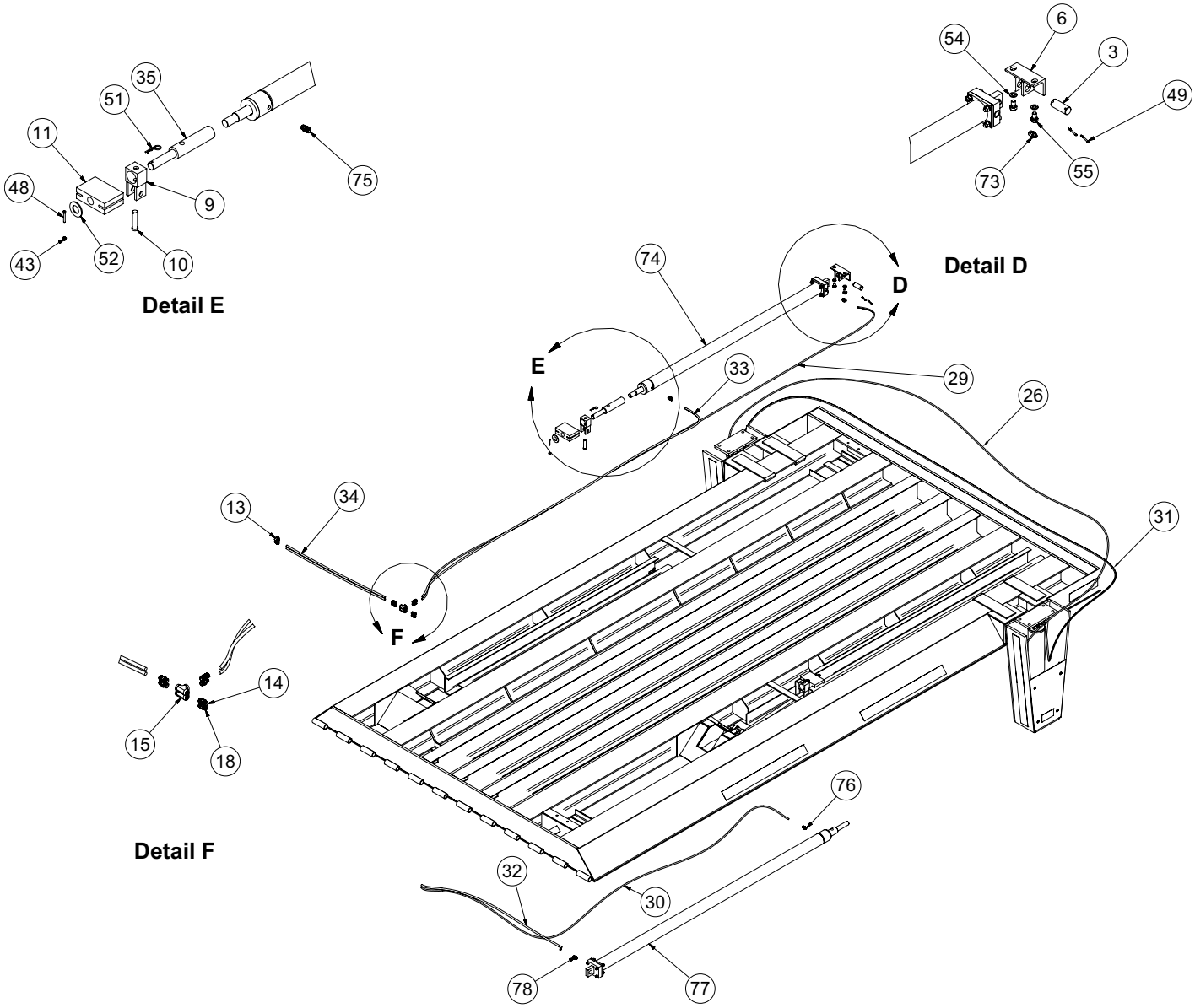
Fig. 17 — 18' model



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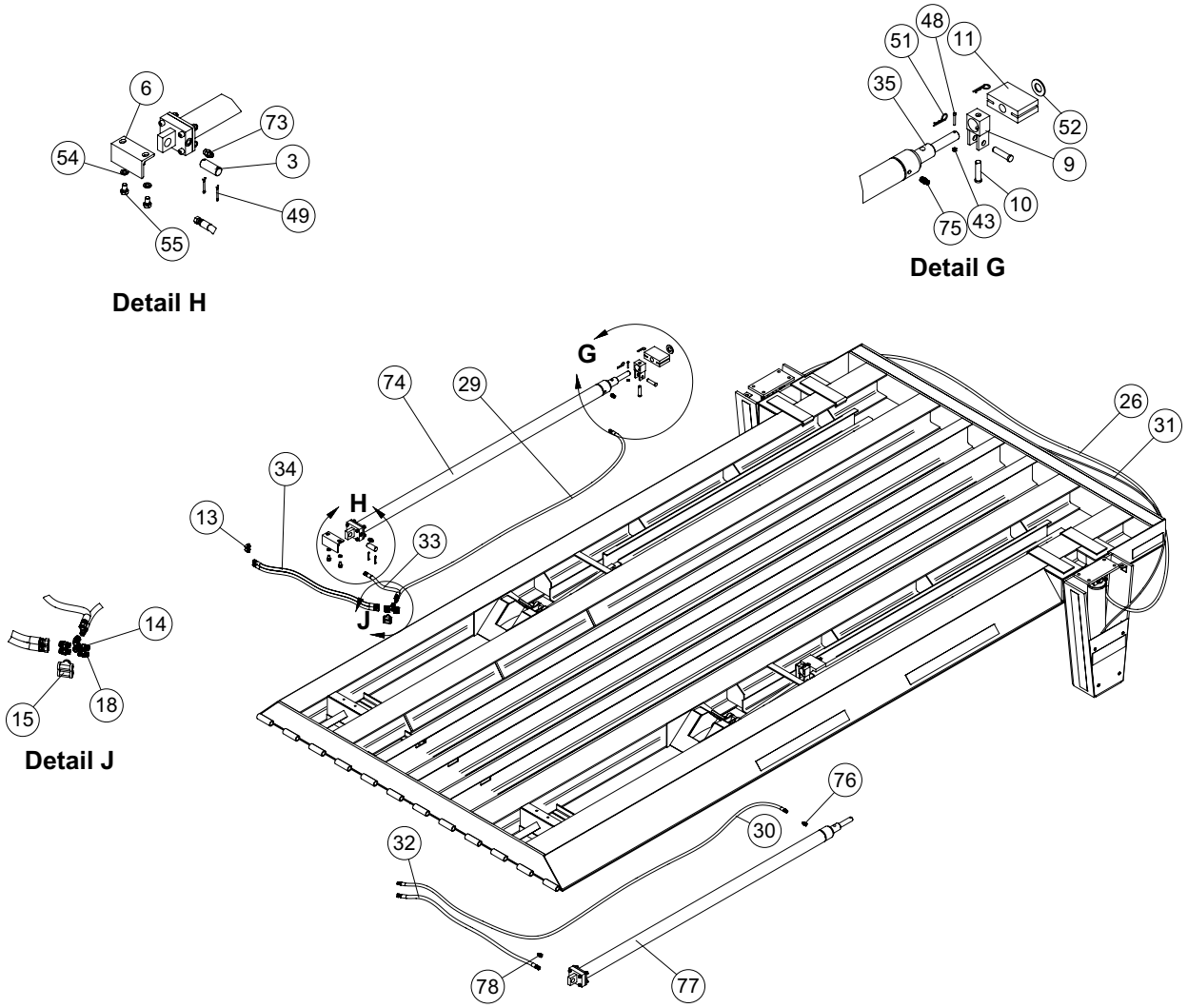
PARTS LIST — TRUCK LEVELER, continued

Fig. 18 — 20' model



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PARTS LIST — TRUCK LEVELER, continued

Item	Quantity	Description	Part Number
1	4	METAL TACK - AMTACK #3126	G0324
2	2	LABEL, KELLEY HULK LABEL, SERCO LOADWARRIOR	921236 921243
3	2	PIN, CYLINDER - BASE	711216
4	4	BUSHING, BRONZE 1-1/4 OD X 1 ID	711212
5	2	PIN, CHOCK ROLLER	711211
6	2	CYLINDER ADJUSTMENT ANGLE WELDMENT	711061
7	3	HEX SOC CS CAP SCREW, 1/2-13X2	711057
8	2	BAR, CYLINDER CHOCK EXTENSION	711053
9	2	CYLINDER END BLOCK WELDMENT	711050
10	4	CLEVIS PIN	711048
11	2	ROD SLIDER GUIDE	711047
12	4	ROLLER, CHOCK	6011520
13	2	ELBOW, #8 JIC TO #8 JIC	6011307
14	4	ADAPTER, #8 JIC TO 3/8" NPT	6011304
15	2	TEE, 3/8 NPT	6011303
16	1	ASSY, CYLINDER, 3" PISTON, 1-1/2" ROD	6011279
17	1	ASSY, CYLINDER, 3" PISTON, 2" ROD	6011276
18	2	ADAPTER, #6 JIC TO 3/8 NPT	6011272
19	2	CYLINDER COVER PLATE	6011261
20	2	TOP RAM PIN	6011255
21	2	PIN RESTRAINT	6011254
22	1	ASSY, CYLINDER, 4" RAM	6010142
23	1	ASSY, CYLINDER, 5" PISTON, 3" ROD	6010128
24	2	HSHCS, 1/4-20 X 2-1/4	6010123
25	1	TAG, PRODUCT INFO/SERIAL #	6009761
26	1	WIRE, 7M	6008698
27	4	LABEL, HAZARD	6008555
28	1	LIMIT SWITCH	6008438
29	1	HOSE, #6 X 212" — 18' MODEL	380557
		HOSE, #6 X 118" — 20' MODEL	6013952
30	1	HOSE, #6 X 156"	380556
31	1	HOSE, #6 X 20'	380555
32	1	HOSE, #8 X 60"	380554

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PARTS LIST — TRUCK LEVELER, continued

Item	Quantity	Description	Part Number
33	1	HOSE, #8 X 134" — 18' MODEL	380553
		HOSE, #8 X 21" — 20' MODEL	6013630
34	2	HOSE, #8 X 42"	380552
35	1	CYLINDER ROD EXTENSION (18' MODEL ONLY)	380416
36	1	WDMT, DECK, TLAC, 101824	380391
37	2	COVER PLATE LOCK WELDMENT	380386
38	1	COVER PLATE LOCK WELDMENT	380385
39	1	COVER, HOSE ACCESS	380375
40	2	COVER, CYLINDER ACCESS	380374
41	2	CHOCK ASSEMBLY	380324
42	2	WDMT, CYLINDER BASE PLATE	380215
43	6	NLN - 1/4-20 UNC	214502
44	4	NLN - 3/8-16 UNC	214204
45	2	PIN, CHOCK	155275
46	9	LABEL, DO NOT TRIP WARNING	138837
47	8	SLOTTED TRUSS HEAD MACHINE SCREW	131477
48	4	HEXAGON SOCKET HEAD CAP SCREW	131300
49	8	COTTER PIN, 3/16X2	035074
50	2	CYLINDER BOTTOM PIN	004021
51	4	HAIR PIN COTTER	000547
52	2	PW 1 5/16 - 1.3125ID X 2.5 OD	000186
53	4	PW 1 1/16 - 1.062ID X 1.5 OD	000064
54	4	LW, 5/8 REGULAR	000053
55	4	HB 5/8-11 UNC - 1 - GR8	000009
56	1	HEX SOC CS CAP SCREW, 1/2-13X2	711057
57	1	ASSY, DECK, TL-AC 101824	6011465
58	1	COVER PLATE LOCK WELDMENT	6011046
59	1	COVER, HOSE ACCESS	6011045
60	2	HOSE COVER PLATE SUPPORT ANGLE	6011048
61	2	ROLL PIN, 1/4 X 1-3/4, ZP	6010126
62	8	AB, WEDGE, 3/8" X 3"	6009399
63	4	PLATE, LIFTING	6008347
64	1	HOSE, #8 X 23'	380551

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Item	Quantity	Description	Part Number
65	2	HOSE, #8 X 39'	380550
66	1	POWER UNIT, TL-AC, 7.5 HP, 230/460V, 3 PH, 60 HZ	380450
67	4	HINGE ANGLE SUPPORT	380400
68	2	WDMT, GUARD RAIL	380218
69	1	HINGE ROD	380189
70	1	WDMT, REAR HINGE ANGLE	380186
71	4	BOLT, 3/4-10 X 2, GR 5	131515
72	8	AB, WEDGE, 5/8" X 4-1/2"	131294
73	1	ADAPTER, #6 JIC TO #8 O-RING	6011273
74	1	CYLINDER, 3" PISTON, 1-1/2" ROD (18' MODEL ONLY)	380409
75	1	ADAPTER, #8 JIC TO 3/8" NPT	6011304
76	1	ADAPTER, #6 JIC TO 3/8 NPT	6011272
77	1*	CYLINDER, 3" PISTON, 2" ROD	380242
78	1	ADAPTER, #8 JIC TO #8 O-RING	6011305

*Quantity 2 for 20" model.

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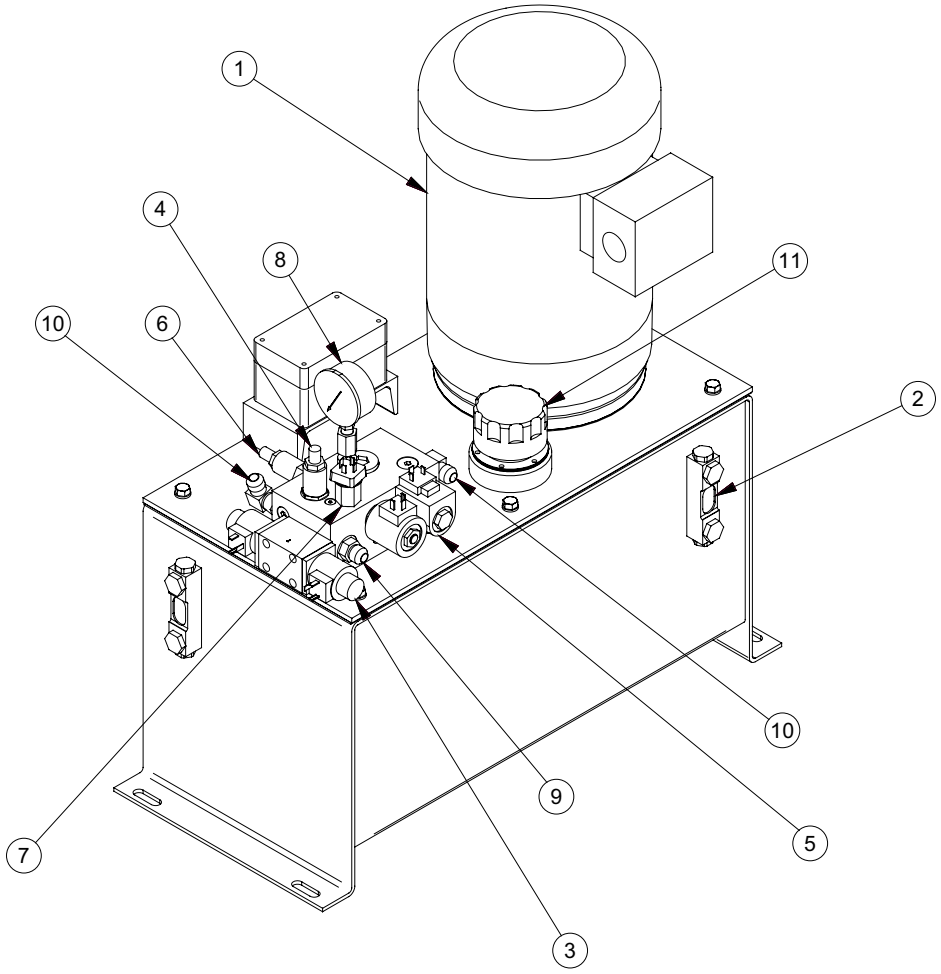
PARTS LIST — HYDRAULIC POWER UNIT

Fig. 19



Item	Quantity	Description	Part Number
1	1	MOTOR, 7 1/2 HP, 1800 RPM, 230/460 V	032018
2	2	SIGHT GAUGE	033028
3	2	SWITCHING SOLENOID COIL	024117
4	1	FLOW CONTROL VALVE	024015
5	2	SOLENOID COIL	024104
6	1	PRESSURE RELIEF VALVE	024165
7	1	PRESSURE SWITCH	029667
8	1	GAUGE 0-4000 PSI	033022
9	1	STRAIGHT FITTING	026179
10	2	ELBOW FITTING	026076
11	1	FILLER BREATHER	033013

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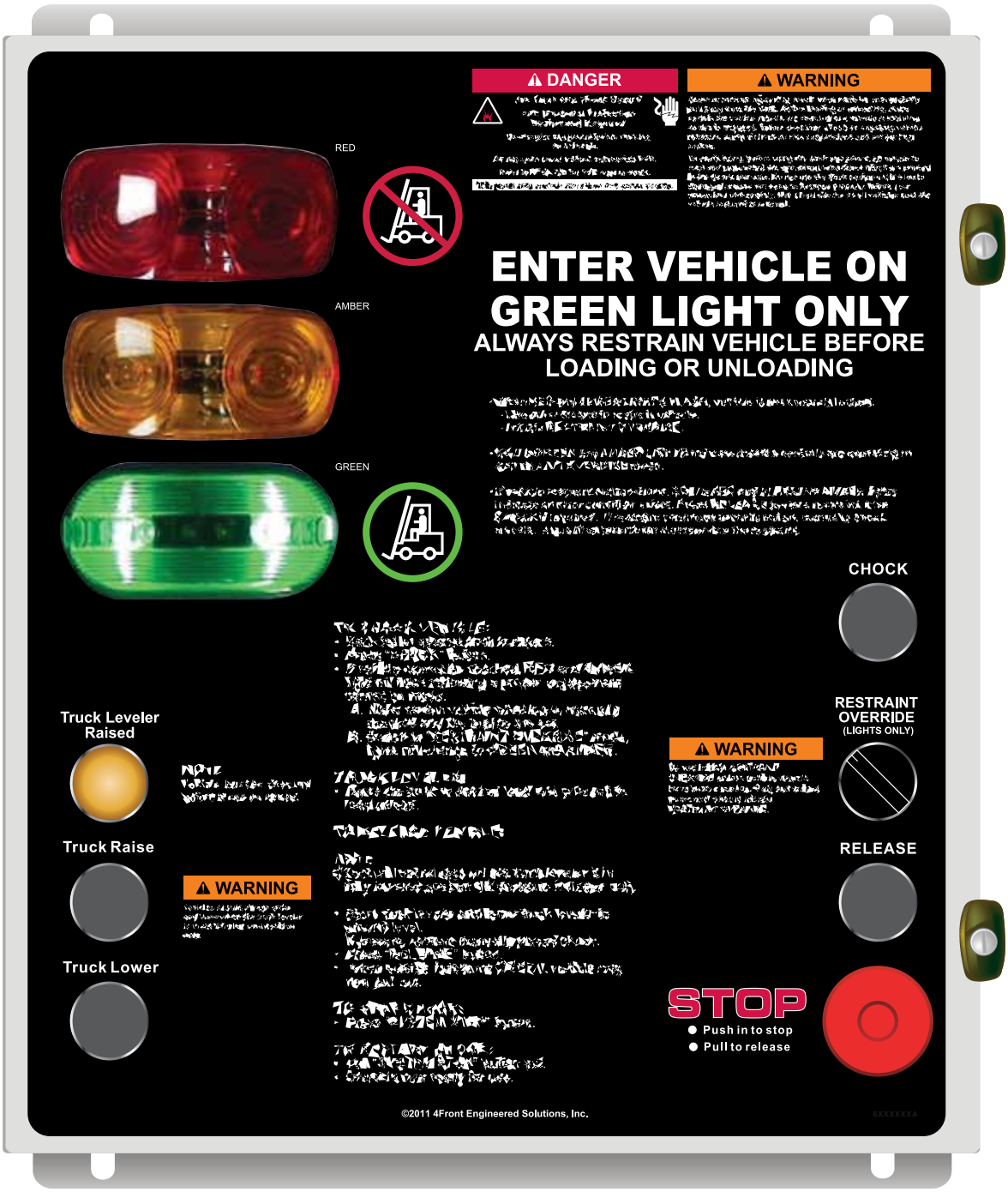
Fig. 20



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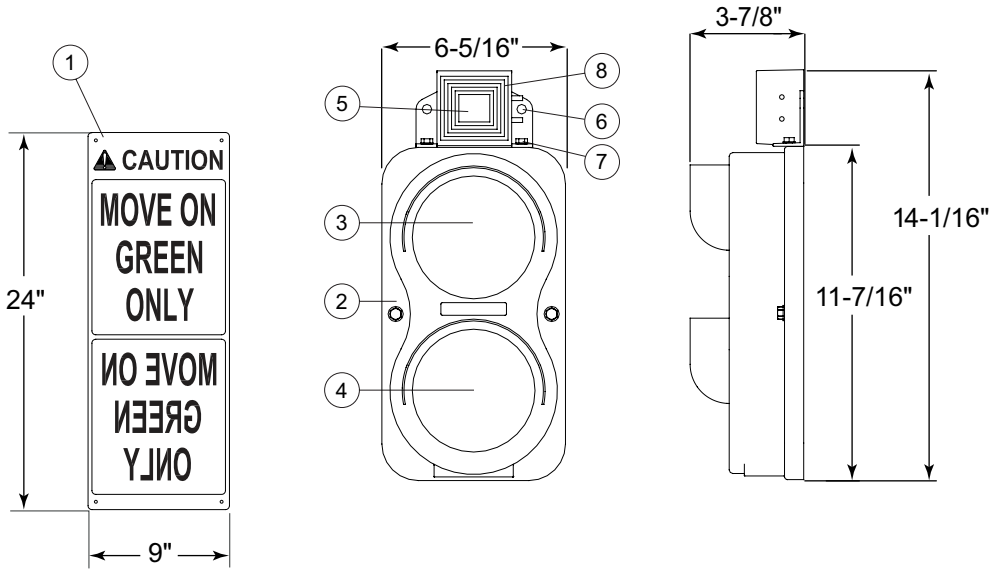
PARTS LIST — RED/ GREEN LIGHT

Fig. 21



Item	Quantity	Part Description	Part Number
1	1	OUTSIDE SIGN – NORMAL AND REVERSE LETTERING	709-832
2	1	LIGHT ASSY - COMPLETE (LEDS, ALARM, MOUNTING HARDWARE)	6007798
3*	1	RED LED LIGHT ASSY.	6007800
4*	1	GREEN LED LIGHT ASSY.	6007801
5*	1	ALARM	061619
6*	2	CARRIAGE BOLT 1/4-20 X 1 1/4" ZINC PLATED	213019
7*	2	HEX NUT 1/4-20 ZINC PLATED	214161
8	1	OUTSIDE LIGHT/ALARM ASSEMBLY	6009530

**** Part of Item 2 and 8.***

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LIMITED WARRANTY

THIS LIMITED WARRANTY IS 4FRONT'S SOLE AND EXCLUSIVE WARRANTY WITH RESPECT TO THE TRUCK LEVELER AND IS IN LIEU OF ANY OTHER GUARANTEES OR WARRANTIES, EXPRESS OR IMPLIED

4FRONT warrants that this TRUCK LEVELER will be free from flaws in material and workmanship under normal use for a period of one (1) year from the earlier of 1) 60 days after the date of initial shipment by 4FRONT, or 2) the date of installation of the TRUCK LEVELER by the original purchaser, provided that the owner maintains and operates the TRUCK LEVELER in accordance with this User's Manual.

In the event that this TRUCK LEVELER proves deficient in material or workmanship within the applicable Limited Warranty period, owner shall so notify 4FRONT, and 4 Front will, at its option:

1. Replace the TRUCK LEVELER, or the deficient portion(s) thereof, without charge to the owner; or

2. Alter or repair the TRUCK LEVELER, on site or elsewhere, without charge to the owner.

This Limited Warranty does not cover any failure caused by improper installation, abuse, improper operation, negligence, or failure to maintain and adjust the TRUCK LEVELER properly. Parts requiring replacement due to damage resulting from vehicle impact, abuse, or improper operation are not covered by this warranty. 4FRONT DISCLAIMS ANY RESPONSIBILITY OR LIABILITY FOR ANY LOSS OR DAMAGE OF ANY KIND (INCLUDING WITHOUT LIMITATION, DIRECT, INDIRECT, CONSEQUENTIAL OR PUNITIVE DAMAGES, OR LOST PROFITS OR LOST PRODUCTION) arising out of or related to the use, installation or maintenance of the TRUCK LEVELER (including premature product wear, product failure, property damage or bodily injury resulting from use of unauthorized replacement parts or modification of the TRUCK LEVELER). 4FRONT's sole obligation with regard to a TRUCK LEVELER that is claimed to be deficient in material or workmanship shall be as set forth in this Limited Warranty. This Limited Warranty will be null and void if the original purchaser does not notify 4FRONT's warranty department within ninety (90) days after the product deficiency is discovered. .

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF, INCLUDING, BUT NOT LIMITED TO, A WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, ALL OF WHICH 4FRONT HEREBY DISCLAIMS

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Please direct questions about your Truck Leveler to your local distributor.

Your local distributor is:

Corporate Head Office:

1612 Hutton Dr. Suite 140
Carrollton, TX. 75006
Tel. (972) 466-0707
Fax (972) 323-2661

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